

What is claimed is:

1. A method of measuring optical signal power in an optical system, comprising:
 - receiving optical signals at a wavelength select switch;
 - coupling a received optical signal through the wavelength select switch to a power meter; and
 - measuring a power level of the optical signal passed through the wavelength select switch using the power meter.
2. The method of claim 1, further comprising:
 - passing a subset of the optical signals through the wavelength select switch at substantially the same time; and
 - measuring power in the subset of optical signals using the power meter.
3. The method of claim 1 wherein the optical signals comprise different wavelengths of optical energy.
4. The method of claim 1, further comprising:
 - diverting a portion of optical energy on an optical

medium to obtain the optical signals.

5. The method of claim 4 wherein diverting comprises:
using a power splitter to divert a portion of the
signal power from an incident signal.

6. The method of claim 1 wherein the optical system
comprises a dense wavelength division multiplexing (DWDM)
system.

7. The method of claim 1, further comprising:
successively directing other ones of the optical
signals through the wavelength select switch to the power
meter; and
measuring power in the other optical signals using the
power meter.

8. The method of claim 1 wherein the wavelength
select switch is a crossbar switch having one or more
inputs for receiving the optical signals.

9. The method of claim 1, further comprising:

displaying an indication of the power in the optical signal.

10. The method of claim 1, further comprising:
determining if the power in the optical signal has crossed a predetermined threshold; and
triggering an alarm if the power in the optical signal has crossed the predetermined threshold.

11. The method of claim 1, wherein the optical system includes a transmission medium from which the optical signals are received, and the method further comprises:
controlling an optical amplifier in accordance with the power of the optical signal to regulate optical power of the optical signals on the transmission medium.

12. Apparatus for measuring optical signal power in an optical system, comprising:

a wavelength select switch having output ports to selectively pass a received optical signal to one of the output ports; and

a power meter which receives the optical signal from

the output port and measures the power in the optical signal.

13. The apparatus of claim 12 wherein the wavelength select switch passes a subset of the optical signals to the output port at the same time and the power meter measures power in the subset of optical signals.

14. The apparatus of claim 12 wherein the optical signals comprise different wavelengths of light.

15. The apparatus of claim 12, further comprising:
an optical tap that diverts a portion of optical signals incident on an optical medium to obtain the optical signals.

16. The apparatus of claim 15 wherein the optical tap diverts a portion of power from the optical traffic.

17. The apparatus of claim 12 wherein the optical system comprises a dense wavelength division multiplexing (DWDM) system.

18. The apparatus of claim 12 wherein the wavelength select switch cycles others of the optical signals to the output port and the power meter measures power in the other optical signals.

19. The apparatus of claim 12 wherein the wavelength select switch is a crossbar switch having one or more inputs for receiving the optical signals.

20. An optical system comprising:
an optical medium which carries different wavelength of optical energy;
an optical tap which siphons the different wavelengths of optical energy from the optical medium;
a wavelength select switch having output ports, which receives the siphoned wavelengths of optical energy from the tap and which selectively passes at least one of the wavelengths to one of the output ports; and
a power meter which receives the at least one wavelength from the output port and which measures power in the at least one wavelength.

21. The optical system of claim 20 wherein the optical tap siphons only a portion of the wavelengths from the optical medium.

22. The optical system of claim 20 wherein the wavelength select switch passes, to another of the optical ports, a wavelength that is not included in the at least one wavelength.

23. The optical system of claim 20, further comprising:

an optical amplifier which regulates power of the wavelengths of light on the optical medium in response to measured power in the at least one wavelength.